Letter by Pilgrim Regarding Article, “Echocardiography Screening for Rheumatic Heart Disease in Ugandan Schoolchildren”

To the Editor:

I read with interest the article by Beaton et al \(^1\) reporting prevalence rates of rheumatic heart disease (RHD) among schoolchildren in Uganda by echocardiography screening.

Detection of clinically silent valvular lesions consistent with RHD prompting timely implementation of secondary prevention reduces the effect of cumulative exposure and may prevent later morbidity and mortality. Reports from active surveillance programs among schoolchildren across a broad age range set the basis for institutionalized screening programs in endemic regions.\(^1\)–\(^4\) The selection of the most advantageous age group to undergo cross-sectional screening for detection of the largest burden of still preventable morbidity remains to be determined, however, and may be understood by investigating the importance of age and stage of disease at presentation, risk factors of disease progression, and efficacy of secondary prevention for subclinical RHD. In line with previous reports, Beaton et al \(^1\) documented increasing prevalence rates in children \(>9\) years of age, which particularly applied to possible RHD and to a lesser extent to probable/definite RHD. Although absolute prevalence rates are difficult to compare across different geographic, ethnic, and economic regions, 2 reports from India\(^2,3\) and 1 report from Mozambique\(^4\) corrobore the observed pattern without indicating an association between age at time of diagnosis and stage of disease.

Assuming progression of valvular lesions across a continuous spectrum, the increasing prevalence in possible RHD with advancing age as a result of cumulative exposure would be expected to be paralleled by a similar increase in probable/definite RHD. However, the distribution of children diagnosed with possible and probable/definite RHD per age category documented by Beaton et al \(^1\) suggests a rather unpredictable pattern of disease progression and regression instead.

Three observational surveys with follow-up echocardiography data reported regression of morphological and/or functional valvular lesions in 28% to 33% of children after a follow-up period between 6 and 24 months,\(^2,3,5\) with comparable proportions irrespective of possible or probable RHD\(^6\) and isolated morphological and combined morphological and functional lesions,\(^3\) respectively. Progression was observed in \(\leq 8\)% and stable disease in 47% to 68% of children. Progression and regression as functions of stage of disease at diagnosis have not been prospectively investigated in large cohorts and will be important to establish an algorithm for clinical follow-up and to guide secondary prevention.

The natural course of disease cannot be reliably modeled on the basis of our current knowledge, and factors determining progression of echocardiographic lesions consistent with possible or probable RHD are still poorly understood. In addition, the finding of clinically silent RHD introduced by the increased sensitivity of echocardiography screening challenges our current concept of secondary prevention. The extent of morphological and functional valvular disease vindicating installation of regular secondary prevention needs to be delineated in prospective clinical trials.

Beaton et al \(^1\) can be congratulated for embarking on a promising journey into uncharted territory and are encouraged to present follow-up data of the children with possible/probable RHD. Studies with longitudinal follow-up will be needed to guide health resource use in developing countries.

Disclosures

None.

References

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